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10/613,499	07/03/2003	Hugh Herr	VblMechImp01	4424
28731	7590	04/19/2007	EXAMINER	
LEE WEINSTEIN 32A FAIRMONT STREET ARLINGTON, MA 02474			BLANCO, JAVIER G	
			ART UNIT	PAPER NUMBER
			3738	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
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Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

ED

Office Action Summary	Application No. 10/613,499	Applicant(s) HERR, HUGH	
	Examiner Javier G. Blanco	Art Unit 3738	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 2,4-8,10 and 11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, and 9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims.

a. Therefore, the “stiffness controller” (see independent claim 1, line 5) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

b. Therefore, the “spring-rate controller” (see independent claim 9, line 3) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Response to Arguments

2. With regards to the objection to the drawings, Applicant's arguments filed November 6, 2006 have been fully considered but they are not persuasive.

a. Regarding the “stiffness controller” (see independent claim 1, line 5), and the “spring-rate controller” (see independent claim 9, line 3), the Applicant amended page 16 of the Specification at line 26 “*to specifically call out this equivalence*” (according to the Response filed November 6, 2006). Page 26 of the Specification at line 26 has been amended to indicate: “*Control electronics (also referred to herein as “stiffness controller”, and “spring-rate controller”)*”.

Page 26 of the Specification at lines 23-35 **discloses the embodiment of Figure 16.** According to the Applicant: “*the control electronics is already called out in figure 7 by reference designator 710*”. The Examiner respectfully disagrees. **Figure 7 (as originally filed) does not show or indicate a reference designator 710. Also, the specification does not mention or suggests a “control electronic” added to the embodiment of Figure 7.** The only figure showing a reference designator 710 is Figure 16. It should be noted that Figure 16 discloses a “variable-stiffness” embodiment (a non-elected species).

As previously stated by the Examiner, according to the specification (see paragraphs 0018-0024, 0028, 0065, and 0066), the elected species (embodied in Figure 7) is an “energy transfer embodiment”, particularly a “bi-articular” embodiment. The embodiments of Figures 4-6 and 9-16 are “variable-stiffness embodiments” (having variable/controllable/adjustable spring-rate). It seems, from the claim language of claims 1 and 9 (and now, from the Response filed November 6, 2006) that said subject matter is drawn to a “variable-stiffness embodiment” (non-

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elected species), rather than an “energy transfer embodiment” (see elected “bi-articular” embodiment shown in Figure 7).

Claim Objections

3. Claim 9 is objected to because of the following informality: please substitute “the spring rate a” (see line 2) with --the spring rate of a--. Appropriate correction is required. This was addressed during the previous Office Action.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1, 3, and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Regarding independent claim 1, the limitation “a controllable-stiffness spring element” is indefinite as to the scope of the invention.

According to the specification (see paragraphs 0018-0024, 0028, 0065, and 0066), the elected species (embodied in Figure 7) is an “energy transfer embodiment”, particularly a “bi-articular” embodiment. The embodiments of Figures 4-6 and 9-16 are “variable-stiffness embodiments” (having variable/controllable/adjustable spring-rate). It seems, from the claim language of claims 1 and 9 (and now, from the Response filed November 6, 2006) that said subject matter is drawn to a “variable-stiffness embodiment” (non-elected species), rather than

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an “energy transfer embodiment” (see elected “bi-articular” embodiment shown in Figure 7).

The Examiner will interpret the (broad) claimed subject matter of claim 1 as best understood, meaning that any reference showing some sort of controller (well known in the art) and a spring (which will inherently have a spring rate and/or damping rate) will read on said claim language.

b. Regarding independent claim 9, the limitation “a controllable-spring-rate spring” is indefinite as to the scope of the invention.

According to the specification (see paragraphs 0018-0024, 0028, 0065, and 0066), the elected species (embodied in Figure 7) is an “energy transfer embodiment”, particularly a “bi-articular” embodiment. The embodiments of Figures 4-6 and 9-16 are “variable-stiffness embodiments” (having variable/controllable/adjustable spring-rate). It seems, from the claim language of claims 1 and 9 (and now, from the Response filed November 6, 2006) that said subject matter is drawn to a “variable-stiffness embodiment” (non-elected species), rather than an “energy transfer embodiment” (see elected “bi-articular” embodiment shown in Figure 7). The Examiner will interpret the (broad) claimed subject matter of claim 9 as best understood, meaning that any reference showing some sort of controller (well known in the art) and a spring (which will inherently have a spring rate and/or damping rate) will read on said claim language.

Response to Arguments

6. With regards to the 112 2nd paragraph rejection, the Applicant's arguments filed November 6, 2006 have been fully considered but they are not persuasive.

a. The Examiner was not able to find in the Specification, as originally filed, that the “*terms “controllable-stiffness spring element” and “controllable spring-rate spring”, are used interchangeably*” (see Response filed November 6, 2006 at page 2, second paragraph).

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 3, and 9 are rejected, as best understood, under 35 U.S.C. 102(b) as being clearly anticipated by Petrofsky et al. (US 5,888,212).

Referring to Figures 1-24B, Petrofsky et al. disclose a variable impedance prosthesis/orthosis comprising a proximal end, a distal end, a stiffness/spring-rate controller (see Abstract), and a controllable-stiffness spring (see column 5, lines 1-23; column 8, lines 41-51) with a variable/adjustable/controllable mechanical advantage (e.g., spring rate, damping rate, etc.). See, for example, column 9, lines 21-57. The method of varying the stiffness/spring-rate with a controller as a function of a repeated cycle of use of said prosthesis or orthosis is disclosed throughout the document. The spring will inherently have a spring rate, stiffness/resistance, and/or damping rate.

Response to Arguments

9. With regards to the 102(b) rejection based on Petrofsky et al. (US 5,888,212), the Applicant's arguments filed November 6, 2006 have been fully considered but they are not persuasive.

a. The Examiner was not able to find in the Specification, as originally filed, that the *“terms ‘controllable-stiffness spring element’ and ‘controllable spring-rate spring’, are used interchangeably”* (see Response filed November 6, 2006 at page 2, second paragraph).

b. Words of the claim are generally given their ordinary and customary meaning, unless it appears from the written description that they were used differently by the applicant. Where an applicant chooses to be his or her own lexicographer and defines terms with special meanings, he or she must set out the special definition explicitly and with “reasonable clarity, deliberateness, and precision” in the disclosure to give one of ordinary skill in the art notice of the change. See *Teleflex Inc. v. Ficosa North America Corp.*, 299 F.3d 1313, 1325, 63 USPQ2d 1374, 1381 (Fed. Cir. 2002), *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1342, 60 USPQ2d 1851, 1854 (Fed. Cir. 2001), and MPEP 2111.01. Pursuant to 35 USC 2nd paragraph, “it is applicant’s burden to precisely define the invention, and not the examiner’s” *In re Morris*, 127 F.3d 1048, 1056, 44 USPQ2d 1023, 1029 (Fed. Cir. 1997).

c. Most of Applicant’s arguments are based on subject matter not disclosed in claims 1, 3, and 9. Petrofsky et al. does disclose a variable impedance prosthesis/orthosis comprising a proximal end, a distal end, a stiffness/spring-rate controller, and a controllable-stiffness spring. The spring will inherently have a spring rate, stiffness/resistance, and/or damping rate.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Javier G. Blanco whose telephone number is 571-272-4747. The examiner can normally be reached on M-F (9:30 a.m.-7:00 p.m.), first Friday of the bi-week off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Corrine McDermott can be reached on (571) 272-4754. The fax phone numbers for the organization where this application or proceeding is assigned is 571-273-8300 for regular communications and After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0858.

Javier G. Blanco



April 5, 2007



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